

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 09706	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/JP2004/019741	International filing date (day/month/year) 24/12/2004	(Earliest) Priority Date (day/month/year) 25/12/2003
Applicant TAKEDA PHARMACEUTICAL COMPANY LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/019741

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D309/12 C07C69/734 C07C59/68 C07C59/72 C07D277/24
 C07D213/30 C07C217/20 C07C233/11 C07D295/18 C07C323/12
 C07C317/18 C07D335/02 C07C205/35 C07D207/26 C07C233/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D C07C C07F A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BEILSTEIN Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
✓ Y	WO 01/79150 A (NOVO NORDISK A/S) 25 October 2001 (2001-10-25) page 3, line 1 - line 12 examples 3,5	1-4, 6-10, 12-20
✓ Y	WO 02/100813 A (ELI LILLY AND COMPANY; LIGAND PHARMACEUTICALS, INC; BROOKS, DAWN, ALIS) 19 December 2002 (2002-12-19) page 4, line 20 - line 28 page 244; example 174	1-4, 6-10, 12-20
✓ Y	WO 03/084916 A (WARNER-LAMBERT COMPANY LLC; FILZEN, GARY, FREDERICK; TRIVEDI, BHARAT,) 16 October 2003 (2003-10-16) page 4, line 20 - line 28 page 59 - page 107; examples 4,5,7,31,32 -/-	1-4, 6-10, 12-20

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

22 April 2005

Date of mailing of the international search report

02/05/2005

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP2004/019741

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
✓ P, X	WO 2004/041266 A (TAKEDA CHEMICAL INDUSTRIES, LTD; FUKATSU, KOHJI; SASAKI, SHINOBU; HINU) 21 May 2004 (2004-05-21) pages 355, 357, 358, 359, 374, 375, 382, 383, 384, 392	1-20
✓ P, X	WO 2004/000315 A (SMITHKLINE BEECHAM CORPORATION; BELL, RICHARD; BESWICK, PAUL, JOHN; GO) 31 December 2003 (2003-12-31) pages 27,79	1-20
✓ A	ITOH Y ET AL: "Free fatty acids regulate insulin secretion from pancreatic beta cells through GPR40" NATURE, MACMILLAN JOURNALS LTD. LONDON, GB, vol. 422, no. 6928, 13 March 2003 (2003-03-13), pages 173-176, XP002903889 ISSN: 0028-0836 the whole document	1

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2004/019741

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 17 and 18 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/019741

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0179150	A	25-10-2001	AU 4827901 A WO 0179150 A1 EP 1276710 A1 JP 2004501076 T US 2002022656 A1	30-10-2001 25-10-2001 22-01-2003 15-01-2004 21-02-2002
WO 02100813	A	19-12-2002	BR 0210190 A CA 2449256 A1 CN 1543451 A CZ 20033309 A3 EE 200400001 A EP 1392637 A2 HR 20031001 A2 HU 0400280 A2 MX PA03011201 A SK 14912003 A3 WO 02100813 A2 US 2005020684 A1	06-04-2004 19-12-2002 03-11-2004 12-05-2004 16-02-2004 03-03-2004 30-06-2004 28-01-2005 26-02-2004 08-09-2004 19-12-2002 27-01-2005
WO 03084916	A	16-10-2003	AU 2003212578 A1 BR 0309169 A CA 2481246 A1 EP 1494989 A2 HR 20040916 A2 WO 03084916 A2 US 2003225158 A1	20-10-2003 25-01-2005 16-10-2003 12-01-2005 31-12-2004 16-10-2003 04-12-2003
WO 2004041266	A	21-05-2004	AU 2003277576 A1 WO 2004041266 A1 JP 2005015461 A WO 2004106276 A1	07-06-2004 21-05-2004 20-01-2005 09-12-2004
WO 2004000315	A	31-12-2003	AU 2003245962 A1 BR 0311931 A CA 2487909 A1 WO 2004000315 A1 EP 1513526 A1	06-01-2004 05-04-2005 31-12-2003 31-12-2003 16-03-2005